

**APPENDIX C –  
COORDINATION WITH US 97 NORTH  
CORRIDOR PROJECT**

## Memorandum

**To:** Rick Williams, Jon Heacock, and Gary Farnsworth: ODOT  
**From:** Nick Arnis, Transportation Engineering Manager  
**Subject:** City of Bend Comments for North End Alternatives  
Screening Process  
**Date:** July 29, 2008

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Attached please find comments from the City of Bend concerning the ODOT North End NEPA alternatives screening process. The memo attached is from Kittelson and Associates and DKS and Associates who are contracted by the City to assist with reviewing and coordinating City staff comments. City staff and the consultants created the attached memo.

There are comments in the consultants report related to four alternatives which include a West B alternative that I believe is no longer being considered.

City staff looks forward to meeting with ODOT in early August to review the comments. In addition, there will be a meeting with emergency services providers on July 28<sup>th</sup>. The attached comments may be refined after these meetings.

### ***City of Bend Staff Recommendations***

Based on this review and comment, the City will work collaboratively with ODOT to refine and enhance the alternatives under consideration during the evaluation process. Specific recommendations to feed into the next steps are summarized below.

- Process Recommendations
  - Incorporate project goals and objectives as criteria for the evaluation of alternatives and screening process. These goal and objective statements are consistent with the principles currently being used for the NE Bend Transportation Study and provide a holistic view of the transportation system and how local and regional facilities can compliment each other
  - At this point in the process, given the lack of detail in the alternatives, and the major congestion issues at Empire and Highway 20, City staff recommends that all the alternatives ( Existing A, East A, and West A) be forwarded into the next stages of the NEPA process with modifications
- Alternative Refinements

- Provide comments by sub-area, topic area, or system component, system element, make it modular----for instance, there are common issues with each alternative on Highway 20, the north end of the area as it ties into existing Highway 97, lack of major connectivity to the City transportation system, and the unresolved impacts on Empire interchange. Also, please review how these alternatives will function with possible future Highway 20 extensions
- Ensure that emergency service provider considerations are used as criteria for evaluating and screening alternatives; City staff believes this is a major unresolved issue with all the alternatives and must be addressed before screening to a final alternative. The three alternatives that are currently being reviewed significantly impact the ability of emergency services to access the transportation system and will significantly increase emergency response times. This is another reason for forwarding all the alternatives into more defined NEPA process
- Discuss and incorporate other elements not addressed, including Transportation System Management, pedestrian and bicycle considerations, Transportation Demand Management. The alternatives must include a multi-modal component such as how major bike and transit facilities are impacted and incorporated into the alternatives.
- Please document that City major sewer lines are located near and adjacent to the Empire interchange and the Highway 97 alignment.
- Work Collaboratively to Address Other General Questions
  - Process & Coordination
    - Reevaluate the timeline for developing a preferred concept by August in order to incorporate the significant issues with connectivity and access to major north end City land uses. Consequently, its more important to resolve the major issues with these alternatives as expressed in this memo than to press ahead to get to one alternative
    - Continue to coordinate with City Staff on UGB expansion through the Agency Coordination Committee
    - Provide opportunities to explore concepts dismissed earlier (i.e., feedback loops) to evaluate and screen based on project goals and objectives. Many of the elements of the earlier concepts have merit at this stage of the process.
    - How does this process fit into the MPO role and rechartering?
    - What opportunities are there to explore concepts dismissed earlier or discrete elements of them?
  - Technical
    - Provide for TSM or TDM solutions

- How are these coordinated with other identified non-auto improvements (i.e., trail from Empire to the Mall area)
- Include the City in design solutions for the Empire Avenue/interchange operations; all the alternatives “point load” Empire interchange. The City recommends that a balanced and series of interchange points be studied and possibly recommended to reduce the reliance on the Empire Interchange.
- What are the assumptions about current and future land use? Please UGB land use assumptions in the process
  - Sensitivity analysis for future land uses
- Please provide the modeling assumptions used to support the analysis
- What are the commercial area impacts (on-going development in and around the Cascade Village development)?
  - Develop a property, access, circulation strategy and plan before further screening
- How is east-west connectivity to or across US 97 going to be addressed? The alternatives presently significantly restrict City street access and connectivity to major commercial and employment centers. The alternatives must provide for reasonable City arterial and collector street connectivity to the state system in order for the northeast transportation to distribute traffic efficiently across the entire system.
- How will context-sensitive design and community appearance elements be addressed? The City refers ODOT to the Northeast Bend Transportation Study principles and believe these should be given weight during the North End NEPA process:
  - Route choice -- project provides optional circulation choices for longer distance trips off the highway system
  - Connectivity— project provides an adequate arterial/collector grid pattern
  - Balanced system flow -- project improves the utilization of under-capacity roadways
  - Reasonable system hierarchy – project supports existing and planned land uses relying on higher-classification roadways for direct access and circulation
  - Multimodal system – project provides adequate facilities and connectivity for non-auto modes
  - Do not preclude – project can be constructed in phases as funding is available

- Maximize investment value – value of project is considered over its functional life even if it is inconsistent with long-term plans
- What are the assumptions for future ownership and responsibility (maintenance)? The alternatives assume the City will become the road jurisdiction for many of the major arterials in the alternatives. The City is likely not prepared or financially able to assume ownership and maintenance responsibilities for major arterials and bridge structures as depicted in the alternatives



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## TECHNICAL MEMORANDUM

### ODOT US 97 North End Corridor Project

### City of Bend Review Comments – July 2008

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**Date:** July 22, 2008 Project #: 9102

**To:** Nick Arnis

**From:** Sonia Hennum, P.E., Brian Ray, P.E. (KAI) & Chris Maciejewski, P.E. (DKS Associates)

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As follow-up to our work session with City Staff on June 16, 2008, this memorandum provides a draft summary of the City of Bend's review comments for the US 97 North End Corridor project. This summary can be used as talking points for future meetings to discuss the project and as a basis for developing the final documentation that will be submitted by the City as input into the ODOT project process.

## OVERVIEW

As part of ODOT's on-going US 97 North End Corridor project, the City of Bend has reviewed the current range of alternatives under consideration. The City has been collaborating with ODOT as a member of the project Steering Committee as well as coordinating various projects at the technical level. The comments provided here summarize the review that has been completed by City Staff and their consultants over the past month. These comments reflect input from City of Bend Engineering, Long Range Planning, Long Range Transportation Planning, and the City of Bend MPO.

The purpose of providing these comments is to provide meaningful and productive input into ODOT's project process. The City is committed to working collaboratively with ODOT to find a successful long-range plan for the transportation system in North Bend that will include improvements to US 97 as well as to the City's transportation network. A successful and quality outcome for the US 97 North End Corridor project is desired and will be of mutual benefit to ODOT, the City, and the community at large. A quality project is one in which the products, solutions, and the process by which they are achieved are all satisfactory to project participants and stakeholders. Again, the City is committed to working collaboratively with ODOT to ensure that this type of successful outcome is achieved.

It is not the City's intent to only provide a critique of the alternatives but rather to raise discussion points so that the agencies can work together to formulate solutions that will be of mutual benefit.

The comments provided here were developed in consideration of the transportation planning principles currently being used as part of the City's NE Bend Transportation Study. ODOT is an active member of this project's Technical Advisory Committee. The review was conducted with these principles in mind as they are consistent with the documented fundamentals listed in the US 97 North End Corridor project Goals & Objectives. The NE Bend Transportation Study planning principles are to develop the future transportation system in a manner that:

- Provides Route Choices
- Provides Connectivity
- Balances System Flow
- Establishes Reasonable System Hierarchy
- Provides a Multi-modal System
- Does Not Preclude Future Alternatives
- Maximizes Investment Value, and
- Respects Constraints of the Community, Natural, and Financial Environment.

## **SUMMARY OF COMMENTS & OBSERVATIONS**

### ***Comments on General Project Process***

The comments provided in this section relate to general observations the City has related to the process for the US 97 North Corridor Project:

- Throughout the project, there should be a logical grouping, order, or categorizing of the complete range of concepts that were initial developed, screened, and reviewed
  - For decision makers and stakeholders, it would be helpful to group the broad range of alternatives into systematic themes that address individual issues or facilities in a logical way. This would allow an understanding and opportunity for providing input on individual project elements instead of having to negate a concept as a whole due to one smaller element.
- The overall objective for ODOT is to have a defensible process through the alternatives evaluation and selection that will ensure a successful outcome
  - If a project is contested, both ODOT and the City want to have a defensible solid process that clearly supports the decisions that were made (minimize legal challenges and timing hold ups)
  - Similarly, a contested project could delay desired land use goals and multi-modal transportation objectives of the ODOT and the City
- It appears that the project's purpose and need statements (which are only focused on US 97 auto mobility) have been used as the screening tool for alternatives without

consideration for the goals and objectives that apply to broader City, County and MPO objectives

- The concept designs and evaluation focus on auto mobility verses a multi-modal emphasis to provide alternatives to auto travel that may reduce congestion

### ***Comments on Development of Alternatives***

The comments provided in this section relate to general observations the City has related to the development of the alternatives:

- Throughout the project, there should be a logical grouping, order, or categorizing of the complete range of concepts that where initial developed, screened, and reviewed
  - For decision makers and stakeholders, it would be helpful to group the broad range of alternatives into systematic themes that address individual issues or facilities in a logical way. This would allow an understanding and opportunity for providing input on individual project elements instead of having to negate a concept as a whole due to one smaller element.
- The level of detail provided in the alternatives is oversimplified for the types of decisions that are required
  - Examples include providing more conservative estimates for improvement footprints and identifying access restrictions or changes associated with each concept
- Lesson learned from prior studies
  - The US 97 & US 20 Refinement Plan and the US 97/Cooley Road Mid-Term Improvement study processes identified and exposed a variety of project and stakeholder issues that would be helpful in shaping the current study considerations. Many of these were beyond only vehicular auto mobility concerns.
- The study area for evaluation is narrowly focused on US 97
  - It is acceptable for the NEPA process to constrain the improvement concepts to US 97, however these solutions need to be developed and evaluated in a broader context that considers the land uses and system outside of that narrow area
  - US 20 is a key component in any solution and a clear understanding of opportunities and constraints for US 20 in the study area could help with US 97 decisions

### ***Comments on Screening Process***

The comments provided in this section relate to general observations the City has related to the process used for the screening of alternatives:

- It appears that the project's purpose and need statements (which are only focused on US 97 auto mobility, congestion) have been used as the screening tool for alternatives without



consideration for the goals and objectives that apply to broader City, County and MPO objectives

- The consideration and evaluation of “safety” seems to use congestion and mobility as a surrogate measure
  - Defined existing safety issues should be clearly identified and considered
- The ODOT evaluation has determined that there are challenges with all of the remaining alternatives in term of their ability to meet existing ODOT mobility standards
  - As such, it appears that mobility is not a differentiator between the alternatives and other factors need to be considered in the screening process

### ***Technical Comments Consistent Across All Alternatives***

The comments provided in this section are technical comments that are consistent and apply to all of the four remaining alternatives. They are summarized graphically in Figures 1 through 4. These comments can be categorized into six (6) general themes:

- (1) Vision for the future form and function of US 20
  - There is inconsistency with how US 20 is addressed across the various alternatives
  - With the potential UGB expansion in this area, there could be significant changes to US 20 in the future and how it relates to US 97
  - It is important to have a clear vision established for the future form and function of US 20 so that the US 97 mobility concerns and access issues are not also repeated on the US 20 in the future
- (2) Overloading of the Empire Avenue Interchange
  - All concepts focus access from the City to the US 97/US20/Cooley/Robal retail area and Juniper Ridge through Empire Avenue (next possible access off of US 97 is 3 miles further north). As identified by ODOT staff as well, this leads to significant capacity deficiency projections for the Empire Avenue interchange and corridor.
  - Further more, many of the concepts appear to move towards eliminating the Empire interchange due to ramp connections from the US 97/US 20 merge. Doing so would further exasperate the connectivity concerns to the triangle and Juniper Ridge areas discussed below.
- (3) Third Street Extension
  - The extension of Third Street is placed parallel and adjacent to the railroad. As such, new rail crossings and ramp connections would be required to create east-west connectivity as well as additional over crossings of US 97 north of Cooley Road.
  - It is shown as a 2 to 3.5 mile stretch (depending on the concept) that has no access or connection to US 97)

- Driver's coming from the north need to make their decision to access the triangle or Juniper Ridge area well north of their actual destination
- Driver's coming from the south need to make their decision to access the triangle or Juniper Ridge area at Empire Avenue well south of their actual destination
- If this is a "City" street, the City is being obligated to maintain a long roadway that provides little utility for location connectivity
- An alternative interchange form at the north project limit could greatly open opportunities for improved east-west connectivity and general local access
- (4) Under representation of Improvement Footprints
  - Particularly for the US 97/US 20 connection, the interchange footprints appear to be under estimated when reviewed in context of grade separation and functional connectivity
  - It is anticipated that actual designs would have more significant impacts to achieve functional grade changes, ramp lengths, and merging sections
- (5) Access to Juniper Ridge
  - It is not clear how these concept address east-west access to Juniper Ridge
  - It appears that all of the narrowed concepts preclude a new interchange connection to Juniper Ridge and that all access has to occur either at Empire Avenue or significantly further north of Juniper Ridge site
- (6) Urban Form/Use of Land
  - Many of the configurations create awkward parcel remnants or "islands" of inaccessible land, particularly in the US 97/US 20/Nels Anderson/Empire area
  - This is a key concern in terms of the future economic vitality of the area and the ability of the City of effective plan land use in the future

### ***Technical Comments Specific to Individual Alternatives***

The comments provided in this section are technical comments specifically related to each of the four remaining alternatives. They are also summarized graphically in Figures 1 through 4.

- Existing A (formerly MM1)
  - This concept formerly terminated near Rodgers Road
  - Access to the lands between US 97 and the RR between Cooley and Empire requires significant review. Access to all these parcels, especially those north of Empire, east of US 20, and west of US 97 is suspect.
  - This concept likely could still accommodate the US 97/Cooley overpass of the "interim solution" if desired in the future
  - New over crossing of US 20/Robal Road is consistent with NE Bend study connectivity objectives

- This concept appears to be highest ranking of TPAU Screening 1 efforts
- East A (formerly RRA-2-2)
  - This concept likely point loads traffic through US 20/Cooley at grade intersection
  - New over crossing of US 20/Robal Road is consistent with NE Bend study connectivity objectives
  - It is likely that the US 97/US20/3<sup>rd</sup> Interchange footprint will be significantly larger than shown to accommodate necessary grade separations, ramps, and merging lengths
  - Access to parcels north of Empire Avenue, east of US 20, and west of US 97 is suspect and requires review based on resultant ramp and interchange footprints
- West A (formerly RWA-3B-2)
  - This concept no longer shows the connectivity of a Rogers Road overpass of US 97 and RR
  - Concept co-routes US 20 to US 97 and combines their traffic flow south of Cooley Road
  - This concept focuses traffic at the Empire Avenue interchange
    - Routes all northbound Parkway to Juniper Ridge and Mall traffic through the Empire Avenue ramps
    - Routes all southbound US 20 to 3<sup>rd</sup> Street traffic through Empire Avenue ramps
  - The US 97/US 20 junction is shown as a Trumpet “B” form where a Trumpet “A” form is appropriate to serve US 20 directionally
  - The foot print of the US 97/US 20 interchange is likely more impacting than shown
  - The new over crossing of US 20/Robal Road is consistent with NE Bend study connectivity objectives
  - Access to parcels north of Empire, east of US 20, and west of US 97 is suspect based on resultant ramp and interchange footprints
- West B (formerly RWA-4)
  - This concept formerly terminated Clausen Drive
  - This concept no longer shows the connectivity of a Rogers Road overpass of US 97 and RR
  - This concept focuses traffic at the Empire Avenue interchange
    - Routes all northbound Parkway to US 20, Juniper Ridge, and Mall traffic through the Empire Avenue ramps
    - Routes all southbound US 20 to southbound Parkway traffic through Empire Avenue ramps

- New over crossing of US 20/Robal Road is consistent with NE Bend study connectivity objectives
- Access to parcels north of Empire, east of US 20, and west of US 97 is suspect based on resultant ramp and interchange footprints

### ***Comments on Coordination with Other Plans***

The comments provided in this section relate to the coordination of the US 97 North Corridor Project with other planning efforts currently under way by the City of Bend.

- The city has identified a need for 3,005 acres of land for housing and 2,530 acres of land for employment over the 2008 to 2028 planning period. We have identified 9,110 acres of suitable land by priority class (See ORS 197.298) and will be using this land base for evaluating alternative boundary locations under Goal 14.
- The land area being studied under the North US 97 Corridor Project includes lands that are designated exception lands under the Bend Area General Plan and/or the Deschutes County Comprehensive Plan. This is important to note because under the statutory priorities for UGB expansion (ORS 197.298), exception land is priority 2 land, which is the highest priority for Bend to consider for this UGB Expansion. It's very possible that a recommendation from the Planning Commissions (city and county) will include those lands north of Cooley between highways 20 and 97. There is likelihood that these lands will have a General Plan designation for an economic use such as Commercial, Industrial, or Mixed Use.

### ***Comments on Coordination with Juniper Ridge Master Plan***

The comments provided in this section relate to the coordination of the US 97 North Corridor Project with the on-going Juniper Ridge Master Plan effort.

- The set of alternatives currently being reviewed preclude an interchange north of Cooley and south of Deschutes Market interchange. None of the alternatives would allow for what is referred to as a “middle interchange” to Juniper Ridge.
- Access and connectivity to Juniper Ridge as well as the other major commercial and employment land uses in the area, is significantly reduced and excluded causing in turn significant out of direction travel and increase of congestion at the Empire interchange.

### ***Comments Related to Emergency Service Providers***

The comments provided in this section relate to the implications of the various alternatives on the future operations of the emergency service complex (City Fire, County, Fire, Sherriff, State Police, and City Police, 911 Dispatch) located west of US 20 and south of Robal Road. A meeting has been scheduled for July 28 to specifically discuss these issues with the emergency service stakeholder focus group.

- The complex west of US 20 holds City Fire, County, Fire, Sherriff, State Police, and City Police, and 911 Dispatch uses
- There is a definite need to move in all directions in and out of their US 20 access point
- In the future, the providers will have to serve the Juniper Ridge area out of this site
- Current concepts all change their existing ability to exit out on US 20 and result in rerouting, the use back local roads, and out-of-direction travel
  - The new emergency service routes resultant from each of the alternatives are illustrated in Figures ER1 through ER4
- ODOT and the services providers have previously discussed a connection to NW Britta Street that would provide access to Robal Road as an access option
- This emergency service complex is a very important center because of its current access and connection to the parkway (allows very good response times to a lot of places)
- In the long-term they will be other stations added but that doesn't take away from the importance of this location or the areas it serves
- Service providers would be willing to look at alternate locations for their facilities but would have to evaluate how each of those were effect service times to the entirety of the system
- Rail crossings could be a potential other issue and they would not like to see alternatives where service providers are limited to streets that have an at-grade crossing
  - They need to have options to avoid rail crossings to avoid potential delays
- There is a need to ensure that adequate shoulders are provided along future roadway construction to allow safety for traffic stops (right now the Parkway is not sufficient)
- Important to note that it is not just the Jamison Street complex that will be effected by highway changes, many calls draw from multiple stations so other stations will also have to travel through this system and access locations within the study area

## RECOMMENDATIONS

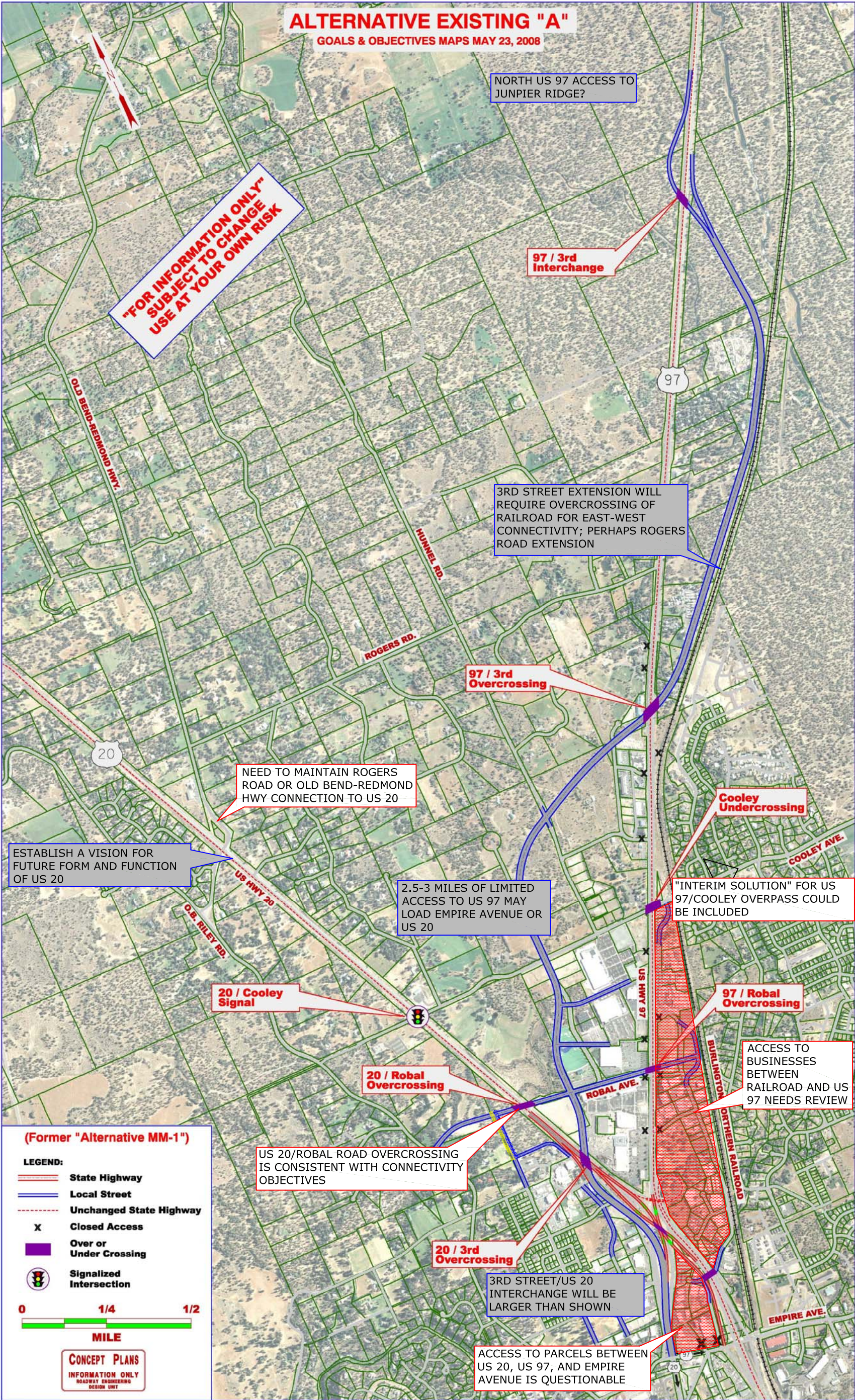
*Please refer to the City cover memo for final recommendations. The following are recommendations by the consultants:*

Based on this review and comment, the City would like to work collaboratively with ODOT to refine and enhance the alternatives under consideration and the evaluation process. Specific recommendations to feed into the next steps are summarized below.

- Process Recommendations
  - Incorporate project goals and objectives as criteria for the evaluation of alternatives and screening process. These goal and objective statements are consistent with the principles currently being used for the NE Bend Transportation Study and provide a wholistic view of the transportation system and how local and regional facilities can compliment each other.
- Alternative Refinements
  - Provide comments by sub-area, topic area, or system component, system element, make it modular
  - Ensure that emergency service provider considerations are used as a criteria for evaluating and screening alternatives
  - Discuss and incorporate other elements not addressed, including Transportation System Management, pedestrian and bicycle considerations, Transportation Demand Management
- Work Collaboratively to Address Other General Questions
  - Process & Coordination
    - Reevaluate the timeline for developing a preferred concept by August
    - Continue to coordinate with City Staff on UGB expansion through the Agency Coordination Committee
    - Provide opportunities to explore concepts dismissed earlier (i.e., feedback loops) to evaluate and screen based on project goals and objectives
    - How does this process fit into the MPO role and rechartering?
    - What opportunities are there to explore concepts dismissed earlier or discrete elements of them?
  - Technical
    - What considerations have been given to TSM or TDM solutions?
      - How are these coordinated with other identified non-auto improvements (i.e., trail from Empire to the Mall area)
    - What are the impacts to Empire Avenue operations?

- What are the assumptions about current and future land use?
  - Sensitivity analysis for future land uses
- Is there documentation of the modeling assumptions used to support the analysis?
- What are the commercial area impacts (on-going development in and around the Cascade Village development)?
  - Property, access, circulation
- How is east-west connectivity to or across US 97 going to be addressed?
- How will context-sensitive design and community appearance elements be addressed?
- What are the assumptions for future ownership and responsibility (maintenance)?





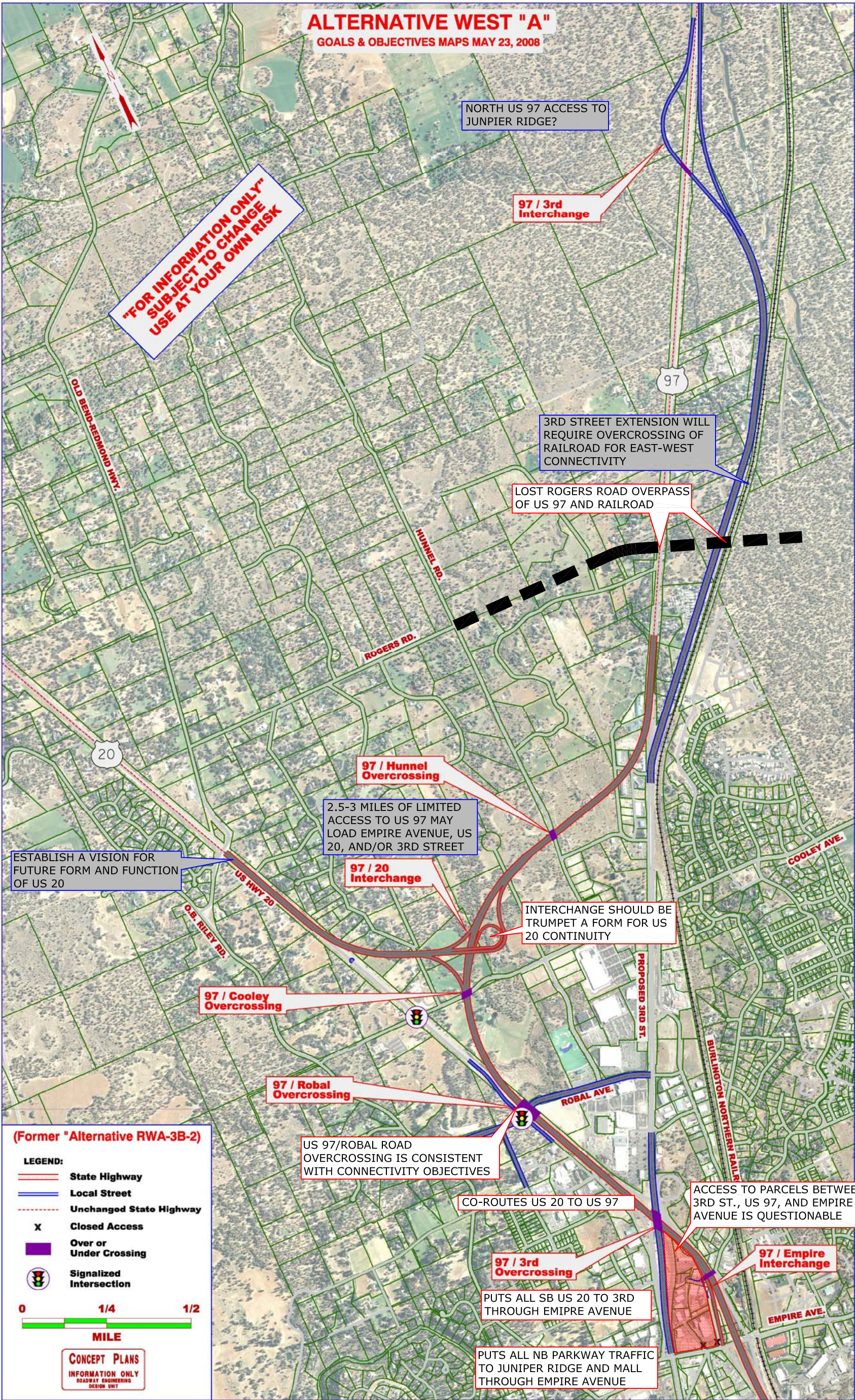
NORTH CORRIDOR SOLUTIONS  
CITY OF BEND COMMENTS ON ALTERNATIVES  
BEND, OREGON





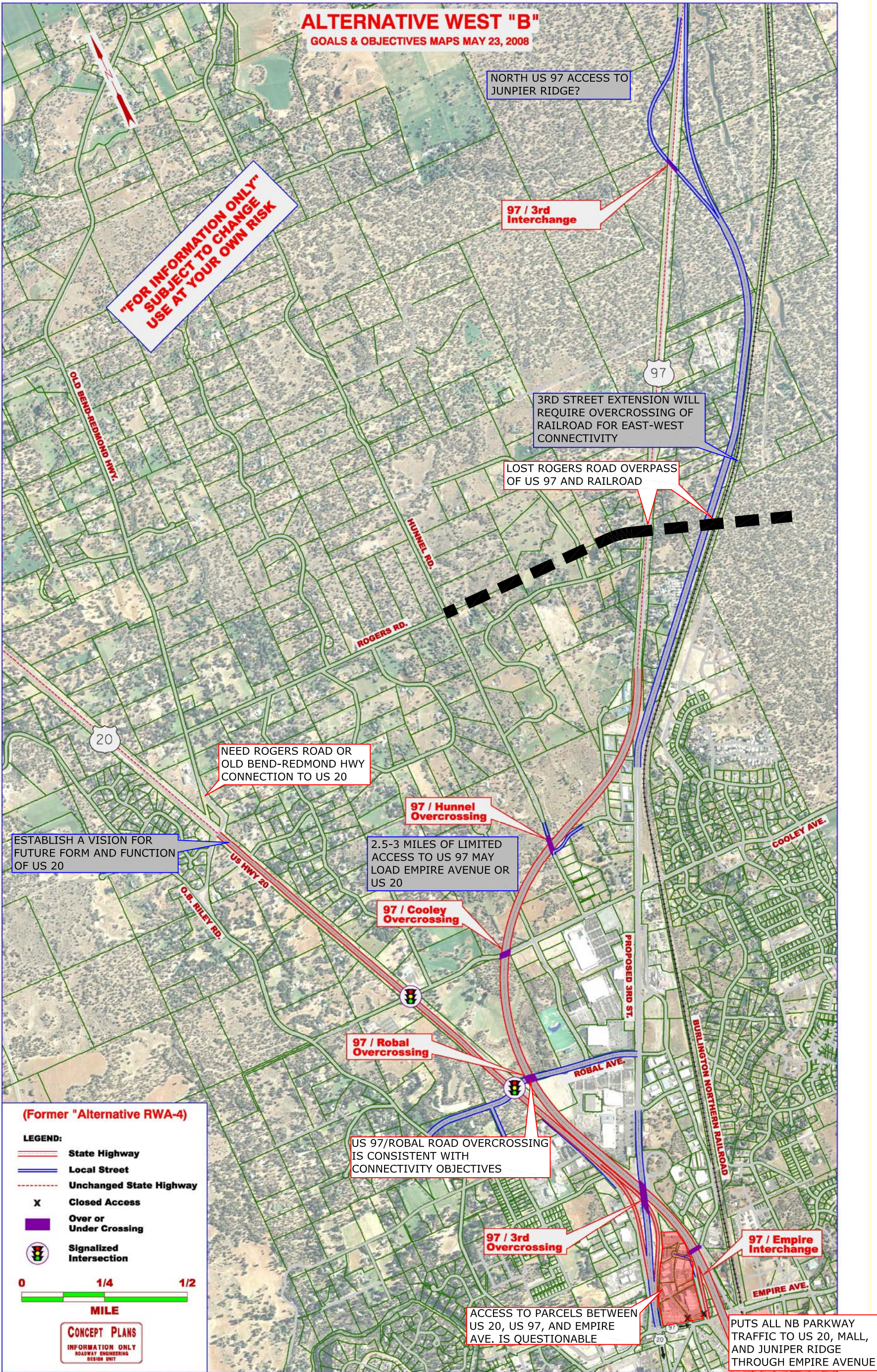
FIGURE 2





NORTH CORRIDOR SOLUTIONS  
CITY OF BEND COMMENTS ON ALTERNATIVES  
BEND, OREGON

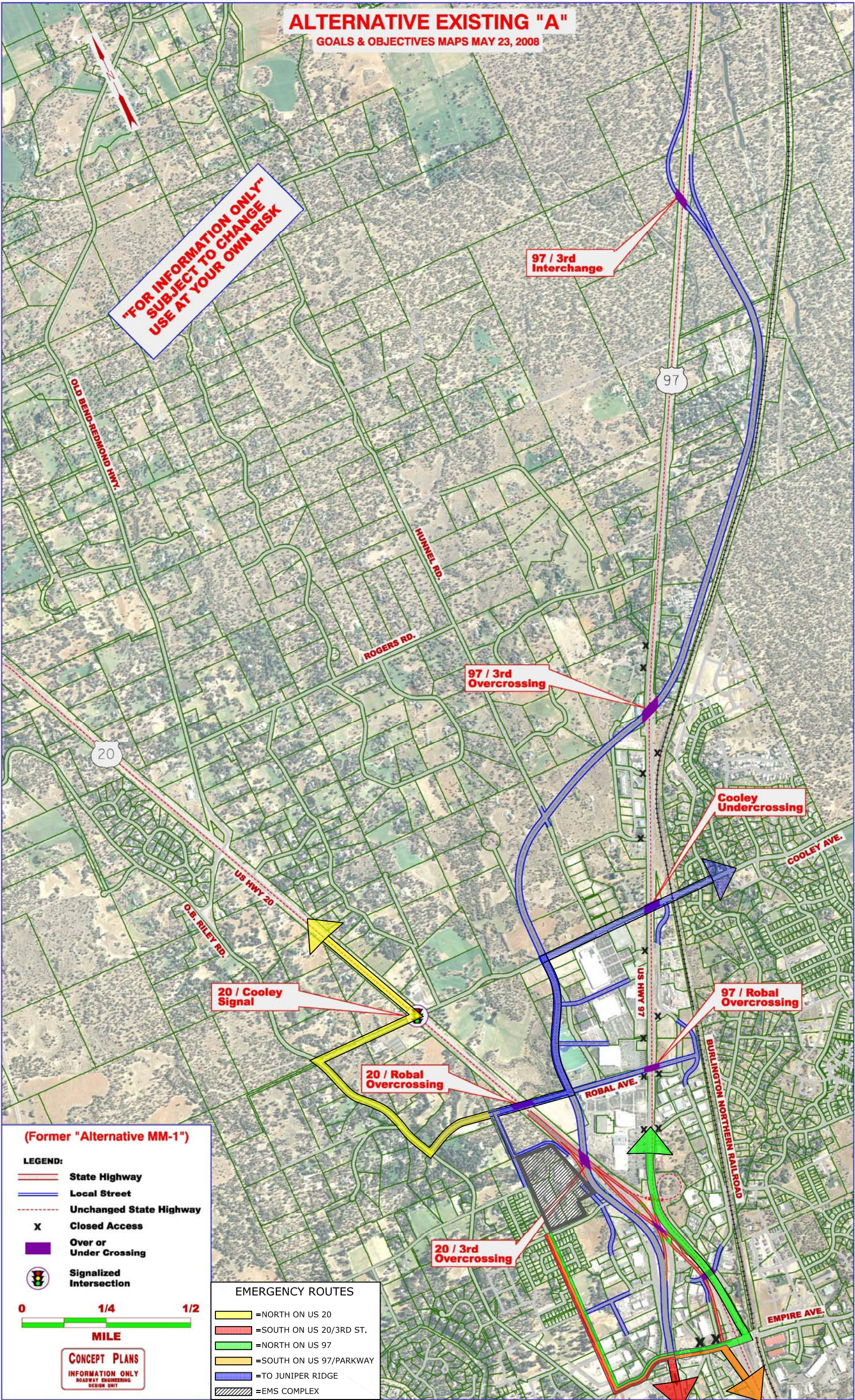




NORTH CORRIDOR SOLUTIONS  
CITY OF BEND COMMENTS ON ALTERNATIVES  
BEND, OREGON

FIGURE  
4



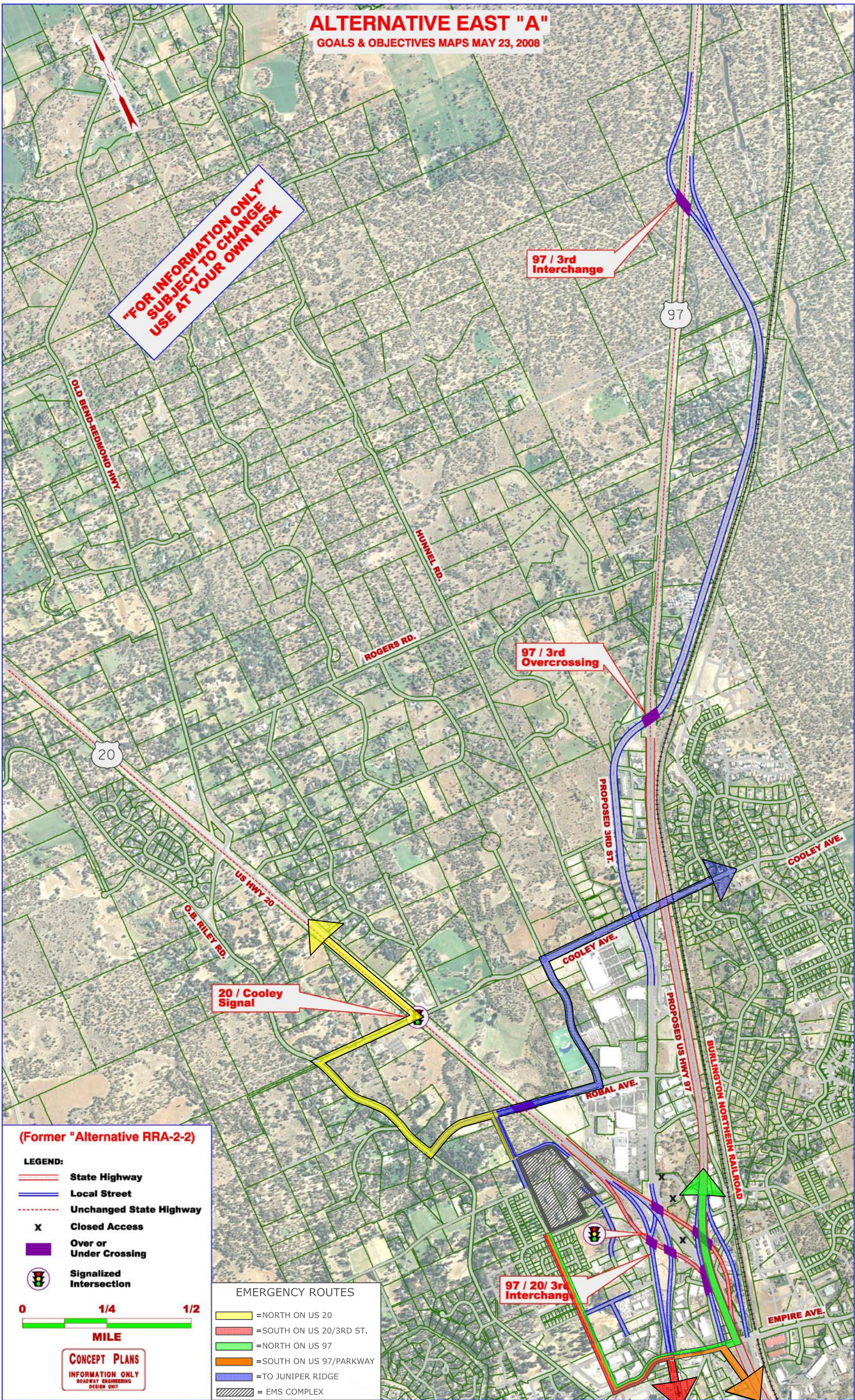


NORTH CORRIDOR SOLUTIONS  
NEW EMERGENCY ROUTES  
BEND, OREGON

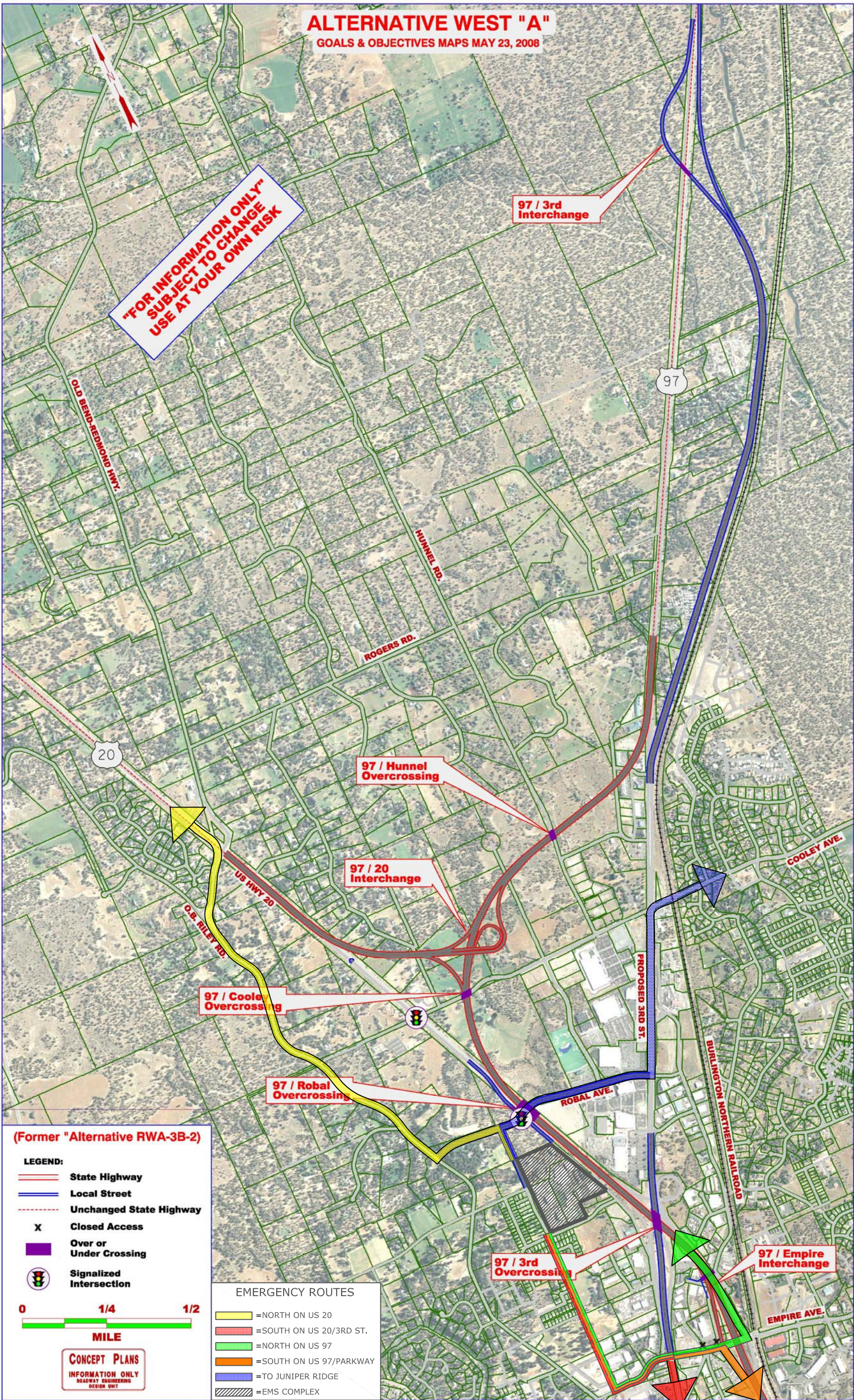
FIGURE  
ER1



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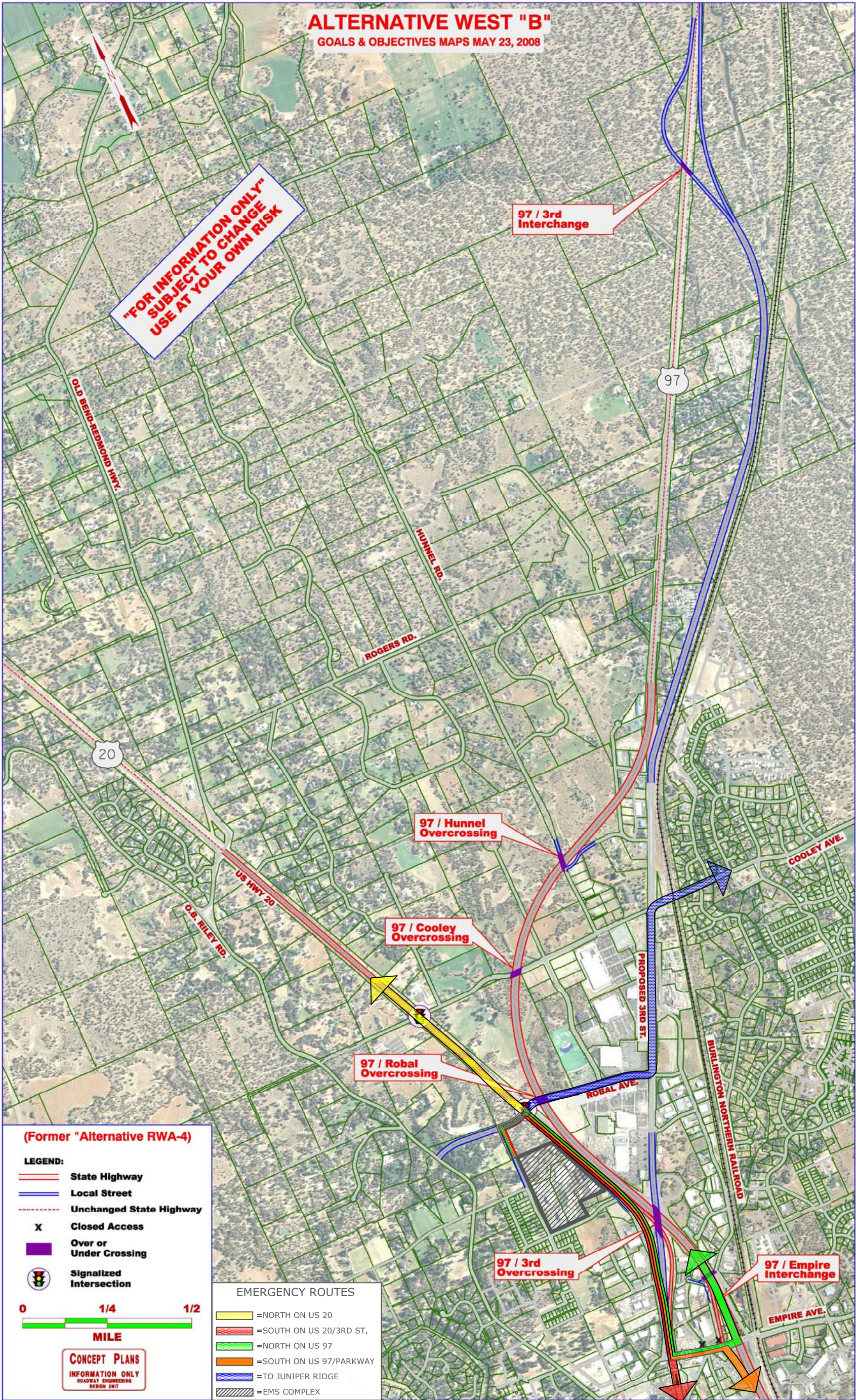




NORTH CORRIDOR STUDY  
NEW EMERGENCY ROUTES  
BEND, OREGON

FIGURE  
**ER3**





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NEW EMERGENCY ROUTES  
BEND, OREGON

FIGURE  
**ER4**